

SPECIFICATION

VESTEL

EVC04

Modbus TCP/IP

Specification

Revision History:

v1.0	Görkem ÖZVURAL (04.12.2020, First version)
v1.1	Mehmet KOSE (25.01.2020, ChargePointState, alive register exp, charging state, equipment state changes)
v1.2	Mehmet KOSE(29.01.2020, Charging current reg type, Failsafe timeout expl.)
V1.3	Mehmet KOSE(30.03.2021, EVSE Fault Code(reg 1006) fix data type from uint16 to uint32)
V1.4	Buğra Görkem Özdağ(23.06.2021, Default timeout value is 20 sec. Session max current, Evse min current, Evse max current and cable max current units are changed to A)
V1.5	Buğra Görkem Özdağ(24.06.2021, TCP socket behavior explanation in timeout condition)
V1.6	Buğra Görkem Özdağ(4.08.2021, EVSE Fault Code register number is changed to 2)
V1.7	Buğra Görkem Özdağ(11.03.2022, EVSE fault codes table)
V1.8	Buğra Görkem Özdağ(28.04.2022, Added info about modbus connection, failsafe state and alive register)

					4: Updating	
Cable State	1004	1	R	uint16	0: Cable not connected 1: Cable connected, vehicle not connected 2: Cable connected, vehicle connected 3: Cable connected, vehicle connected, cable locked	
EVSE Fault Code*	1006	2	R	uint32	0: No fault Other: Fault code	
Current L1	1008	1	R	uint16	L1 Instantaneous Current	mA
Current L2	1010	1	R	uint16	L2 Instantaneous Current	mA
Current L3	1012	1	R	uint16	L3 Instantaneous Current	mA
Voltage L1	1014	1	R	uint16	L1 Voltage	V
Voltage L2	1016	1	R	uint16	L2 Voltage	V
Voltage L3	1018	1	R	uint16	L3 Voltage	V
Active Power Total	[1020,1021]	2	R	uint32	Total Active Power	W
Active Power L1	[1024,1025]	2	R	uint32	L1 Active Power	W
Active Power L2	[1028,1029]	2	R	uint32	L2 Active Power	W
Active Power L3	[1032,1033]	2	R	uint32	L3 Active Power	W
Meter Reading	[1036,1037]	2	R	uint32	Meter Reading	0.1 kWh
Session Max Current	1100	1	R	uint16	Max possible charging current for active session	A
EVSE Min Current	1102	1	R	uint16	Min possible charging current for EVSE	A
EVSE Max Current	1104	1	R	uint16	Max possible charging current for EVSE	A
Cable Max Current	1106	1	R	uint16	Max possible charging current for charging cable	A
Session Energy	[1502,1503]	2	R	uint32	Total Energy for current charging session	Wh
Session Start Time	[1504,1505]	2	R	uint32	Session start time	hhmmss
Session Duration	[1508,1509]	2	R	uint32	Session duration	s
Session End Time	[1512,1513]	2	R	uint32	Session end time	hhmmss
Failsafe Current	2000	1	R/W	uint16	Failsafe charging current during communication failure	A
Failsafe Timeout	2002	1	R/W	uint16	Communication timeout for switching to Failsafe charging current. If the timeout has occurred and the TCP socket is still active, TCP socket restarts. If set, Failsafe period is timeout/2, otherwise 20 sec.	s
Charging Current	5004	1	R/W	uint16	Dynamic charging current	A
Alive Register	6000	1	R/W	uint16	EMS (Master) writes 1 EVSE (Slave) writes 0 (EVSE checks this register at a period of (Failsafe Timeout)/2 for a value of 1, and sets it to 0. Period cannot go less than 3 seconds)	

* Please see table 2 for EVSE fault codes

2. EVSE Fault Codes

EVSE fault code register value is the decimal equivalent of binary fault codes. Each bit defines 1 fault. For example, binary equivalent of register value 16 is 10000. This means 4th bit is set and the fault is PP error.

Bit	Fault
0	Contactors Welded Error
1	Contactors Response Error
2	Interlock Lock Error
3	Interlock Unlock Error
4	PP Error
5	CP Diode Error
6	CP Short Error
7	Overvoltage Phase1
8	Overvoltage Phase2
9	Overvoltage Phase3
10	Undervoltage Phase1
11	Undervoltage Phase2
12	Undervoltage Phase3
13	Overcurrent Phase1
14	Overcurrent Phase2
15	Overcurrent Phase3
16	Residual Current Error
17	Protective Earth Error
18	RFID Error
19	Interlock Permanent Error
20	OCP Permanent Error
21	Load Balance Module 1 Error
22	Load Balance Module 2 Error
23	Load Balance Module 3 Error
24	HMI External RFID Reader Error
25	HMI External MID Communication Error
26	RCD Device Error
27	Installation Error